

Application Serial No. 09/544,292
Attorney Docket No. 2100.0048

IN THE CLAIMS:

The following is a listing of the claims in the application:

1. (Currently amended) A method for sorting objects having machine-readable indicia thereon, comprising the steps of:

capturing object information from the machine-readable indicia on ~~an~~ at least one object moving within a rack system;

determining routing information from the object information;

determining, based on the routing information, a correct sort destination for the at least one object to be delivered to within the rack system;

generating a visual and/or audio command identifying the correct sort destination for the at least one object; and

creating a record for the at least one object including the routing information for delivering the at least one object to the correct sort destination within the rack system and[[.]] a weight for the at least one object and[[.]] a sort rate, a sort accuracy, an idle time, a sort start and stop time, and a number of the objects processed within the rack system.

2. (Currently amended) The method of claim 1, wherein the object information is captured as the at least one object moves on a conveyor belt.

3. (Currently amended) The method of claim 1, wherein the object information is captured as the at least one object moves with manual assistance.

FINNEGAN
HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

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4. (Currently amended) The method of claim 1, further comprising the step of measuring the weight of the at least one object by weighing the correct sort destination containing the at least one object.

5. (Currently amended) The method of claim 1, wherein the generating a visual and/or audio command identifying the correct sort destination for the at least one object is performed by illuminating, an indicator near the correct sort destination.

6. (Currently amended) The method of claim 1, further comprising the step of verifying that the at least one object has been placed into the correct sort destination.

7. (Original) The method of claim 6, wherein the verifying step is performed using a photo sensor, motion detector, or scale.

8. (Currently amended) The method of claim 6, further comprising the step of generating visual and/or audio commands if the at least one object is not placed into the correct sort destination.

9. (Currently amended) The method of claim 8, wherein the step of generating visual and/or audio commands is performed by illuminating an indicator near an incorrect sort destination into which the at least one object was placed.

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GARRETT &
DUNNER LLP

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10. (Original) The method of claim 8, further comprising repeating the previous steps for each subsequent object.

11. (Currently amended) The method of claim 10, further comprising the steps of:

recording when the at least one object is placed in the correct sort destination;
recording when the at least one object is placed in an incorrect sort destination;
recording when a sort is started and stopped; and
calculating, based on the recorded times, a sort rate, a sort idle time, a sort accuracy, and a total number of objects processed.

12. (Cancelled)

13. (Previously presented) The method of claim 1, further comprising the steps of:

uploading the record to a database; and
transmitting data from the database to one or more of an object tracking database, a billing database, and a scan central server.

14. (Original) The method of claim 1, further comprising the step of capturing an operator's identity.

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15. (Original) The method of claim 1 wherein the determining routing information from the object information is performed by comparing the object information to a local or remote database that contains the routing information associated with the object information.

16. (Currently amended) An object sorting system comprising:
a rack system comprising a plurality of sort destination modules, each sort destination module further comprising a sort destination for holding at least one object;
and
a management system comprising:
a control system;
an information capture device for reading machine-readable indicia from each object and for outputting the information to the control system;
an audio system and/or visual indicators for providing instructions to an operator; and
a recording device for creating a record for at least one object within the rack system, including the routing information^{[[,]]} to one of the plurality of sort destination modules and a weight for the at least one object and^{[[,]]} a sort rate, a sort accuracy, an idle time, a sort start and stop time, and a number of the objects processed within the rack system.

17. (Previously presented) The object sorting system of claim 16 wherein the sort destination modules further comprise at least one indicator identifying that the at

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least one object should be placed in the sort destination and wherein the control system outputs a signal to the at least one indicator for each of the plurality of sort destination modules.

18. (Previously presented) The object sorting system of claim 16 wherein the sort destination modules further comprise at least one placement sensor for monitoring when the at least one object is placed in the sort destination and wherein the control system inputs information from the at least one placement sensor for each of the plurality of sort destination modules and determining which sort destination the at least one object was placed in and when the at least one object was placed in the sort destination.

19. (Previously presented) The object sorting system of claim 16 wherein the sort destination modules further comprise a scale for weighing the sort destination and wherein the control system inputs and records the weight of the sort destination containing the at least one object.

20. (Previously presented) The object sorting system of claim 16 wherein the sort destination modules further comprise:

at least one indicator identifying that the at least one object should be placed in the sort destination;

at least one placement sensor for monitoring when the at least one object is placed in the sort destination; and

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a scale for weighing the sort destination;
wherein the control system:
outputs a signal to the at least one indicator for each of the plurality of sort destination modules;
inputs information from the at least one placement sensor for each of the plurality of sort destination modules;
determines which sort destination the at least one object was placed in and when the at least one object was placed in the sort destination; and
inputs and records the weight of the sort destination containing the at least one object.

21. (Original) The object sorting system of claim 20 wherein the management system further comprises a user interface.

22. (Previously presented) The object sorting system of claim 21, wherein the user interface is used to input an operator's identity and to output the operator's identity to the control system.

23. (Previously presented) The object sorting system of claim 20, wherein each of the plurality of sort destination modules further comprises:

a crate placement sensor for monitoring whether the crate is within the sort destination, and

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HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
Washington, DC 20005
202.408.4000
Fax 202.408.4400
www.finnegan.com

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a second indicator for indicating, when the crate should be changed based upon a predetermined parameter associated with the crate.

24. (Original) The object sorting system of claim 23, the rack system further comprising:

a controller area network bus for communicating, with the control system and a controller area network addressing board; and

a controller area network adaptor card for communication between the control system, the controller area network bus, and a plurality of interface boards.

25. (Previously presented) The object sorting system of claim 24, wherein the controller area network adaptor card communicates with at least one of the plurality of interface boards and the controller area network bus, auto-terminating the bus, providing a unique node address for each of the plurality of interface boards, and distributing power to the interface boards.

26. (Previously presented) The object sorting system of claim 25, wherein the controller area network adaptor card communicates with the interface boards, each interface board communicating with the first indicator, the second indicator, and the scale, and additionally capable through additional I/O ports to interface with the sort destination placement sensor and the object placement sensor.

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HENDERSON
FARABOW
GARRETT &
DUNNER LLP

1300 I Street, NW
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27. (Original) The object sorting system of claim 26, wherein the interface boards communicate with the control system through the controller area network bus.

28. (Original) The object sorting system of claim 20, the management system further comprising: an Ethernet connection for communication between the control system and at least one external device; and a serial port for communication between the control system and at least one diagnostic system.

29. (Original) The object sorting system of claim 20, where each placement sensor includes a proximity-type sensor.

30. (Original) The object sorting system of claim 20, where each of the first indicators are mounted near the front-side of each sort destination, and each of the second indicators are mounted near the back-side of each sort destination.

31. (Currently amended) The method of claim 1, wherein the object information is captured as the at least one object moves with mechanical assistance.

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GARRETT &
DUNN LLP

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